IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
ANDERSON DIVISION

Deborah Meek Hickerson, Plaintiff, v. Yamaha Motor Corp., U.S.A., and Yamaha Motor Co., Ltd., Defendants.	)	Civil Action No. 8:13-cv-02311-JMC **ORDER AND OPINION**

This matter is before the court on the Motion in Limine of Defendants Yamaha Motor Corp., U.S.A. and Yamaha Motor Co., Ltd. (collectively, "Defendants") seeking to exclude the expert testimony of Plaintiff Deborah Hickerson ("Plaintiff"). (ECF No. 71-1.) Plaintiff opposes Defendants' Motion in Limine. (ECF No 83.) For the reasons explained below, the court **GRANTS IN PART** and **DENIES IN PART** Defendants' Motion in Limine (ECF No. 71-1.)

I. RELEVANT FACTUAL AND PROCEDURAL BACKGROUND

This action is before the court based on Plaintiff's personal injury product liability claim against Defendants. (ECF No. 19.) Plaintiff alleges Defendants' liability under theories of (1) strict liability, (2) negligence, and (3) breach of warranty for incidents occurring on June 30, 2012 where Plaintiff was severely injured as a result of falling off of a personal watercraft that Defendants designed, manufactured, and distributed. (*Id.* at 2–8.)

The specific personal watercraft Plaintiff was riding when she sustained her injuries was a Yamaha VXS WaveRunner jet ski. Plaintiff appears to rely on the expert testimony of Dr. Anand Kasbekar to support her claims that a) the WaveRunner seat should have included a strap for a passenger to hold on to; b) the WaveRunner seat should have had more sculpting; and c) the

warnings on the WaveRunner should have been located on the passenger seat. (ECF No. 19 at 3–4.)

Plaintiff notes that the "reasonable alternative design" on which it relies—specifically, the more sculpted seat of the Yamaha "Cruiser" jet ski—is a design Defendants themselves "designed, patented, and assembled." (ECF No. 83 at 2.) Plaintiff seeks to admit Dr. Kasbekar's testimony regarding his examination and testing of the design as well as his proposal of that design as one that would have prevented Plaintiff's injuries. (*Id.*) Plaintiff also argues for the admissibility of Dr. Kasbekar's opinions on the WaveRunner's alleged inadequate warning system. (*Id.* at 6–7, 10–12.)

Defendants challenge Dr. Kasbekar's expert testimony on both grounds in its Motion in Limine. (*See generally* ECF No. 71-1.) The court consider Defendants' arguments below.

II. LEGAL STANDARD

Under Fed. R. Evid. 401, evidence is relevant if (1) "it has a tendency to make a fact more or less probable than it would be without the evidence" and (2) "the fact is of consequence in determining the action." Irrelevant evidence may not be admitted as evidence. Fed. R. Evid. 402. Relevant evidence may be excluded where "its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence." Fed. R. Evid. 403.

The admissibility of expert witness testimony is specifically governed by Fed. R. Evid. 702, which provides that an expert may offer their opinion if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

In determining whether expert witness testimony is admissible, the court evaluates whether it is relevant and reliable. *Daubert v. Merrell Dow. Pharms., Inc.*, 509 U.S. 579, 589 (1993). In making an assessment of relevance and reliability, courts, acting as a "gatekeeper" in determining the admissibility of expert testimony, may consider a number of factors, including: (1) whether a theory or technique can and has been tested; (2) whether a theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error, in conjunction with the existence and maintenance of standards controlling the technique's operation; and (4) whether there is "general acceptance" of the theory or technique within the relevant scientific community. *Id.* at 589, 592–595. But *Daubert*'s list of factors is "meant to be helpful, not definitive" and "do not all necessarily apply even in every instance in which the reliability of scientific testimony is challenged." *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 151 (1999). The Court of Appeals for the Fourth Circuit has further stated that "the touchstone of admissibility is whether the testimony will assist the trier of fact." *Wehling v. Sandoz Pharm. Corp.*, 162 F.3d 1158, 1998 WL 546097, at *3 (4th Cir. 1998) (table decision).

The Court of Appeals for the Fourth Circuit also identifies two guiding principles for courts' decisions on the admissibility of expert witness testimony. *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 261 (4th Cir. 1999). First, "court[s] should be mindful that Rule 702 was intended to liberalize the introduction of relevant expert evidence" and second "court[s] must recognize that due to the difficulty of evaluating their testimony, expert witnesses have the potential to be both powerful and quite misleading." *Id.* Regardless, "the proponent of the [expert] testimony must establish its admissibility by a preponderance of proof." *Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 (4th Cir. 2001).

III. ANALYSIS

A. Warning Opinions

1. Parties' Arguments

Defendants generally argue that Dr. Kaskebar's expert testimony as to his warnings opinions should be excluded because he is unqualified to issue a warnings opinions and because those warnings opinions are unreliable. (*See* ECF No. 71-1 at 7–10, 15–24.) Defendants specifically point to Dr. Kaskbekar's own testimony regarding his lack of expertise, his reliance on other expert opinions for his testimony, and the fact that Dr. Kaskbekar's proposed alternative warnings system "lacks any scientific data." (*See id.*) Defendants also argue that the fact that those opinions do not take into account this case's facts render them irrelevant and unhelpful to the jury. (*Id.* at 25–26.)

In response, Plaintiff contends that Dr. Kasbekar "has training, and has taken classes, educating himself on warnings related to safe product design and failure analysis and prevention." (ECF No. 83 at 6–7.) Plaintiff further states that Dr. Kasbekar has developed opinions in other cases with warning issues and has consulted with companies on warning-related issues. (*Id.* at 7.) Plaintiff maintains that Dr. Kasbekar's warning opinions are reliable and relevant because he appropriately consulted another expert and "is free to use his knowledge and training on warnings and rely on [that] consultation . . . in forming his opinions." (*Id.* at 10–11.) Plaintiff asserts that it is not just a witness "who refers to himself as a 'warnings expert'" that "can testify to warning related opinions" as that is not "legal standard for admission of his testimony." (*Id.* at 11.)

2. Court's Review

Plaintiff anticipates Dr. Kasbekar's opinions on the alleged inadequacy of the jet ski warnings as these: 1) the warnings are not directed to at-risk passengers and do not communicate

the specific risks for passengers, 2) they do not provide a shorter warning about orifice injuries that is located near the at-risk passenger for more visibility, and 3) that "under engineering design principles of the safety hierarchy, designing out dangers, when feasible, is required if the alternative design would have prevented th[e] injury." (ECF No. 83 at 12.) These opinions, presumably, are related to Dr. Kasbekar's deposition testimony that the warnings need to be shorter, moved to the rear part of the jet ski seat, and should include a graphic with the rider wearing wet suit bottoms of a different color. (*See* ECF No. 71-7 at 55.) Dr. Kasbekar himself summarizes his opinion in his report as this: "To the extent the Defendants rely upon the use of warnings /education to inform users and in particular passengers of the danger of . . . foreseeable injuries and explain or instruct users on how to reduce or minimize such injury by clothing, operation, and passenger action, the warnings and instructions used by the defendants are inadequate and insufficient given the potential for extremely serious injuries." (ECF No. 71-12 at 2.)

In support of their arguments for excluding Dr. Kasbekar's expert opinion testimony, Defendants explain:

> [Dr. Kasbekar] has no degree or certification regarding warnings or human factors. He has never authored an article on warnings. . . . [H]e agrees that his expertise "in human factors[1] is limited," and he "would not throw [himself] out there as a human factors expert." He believes that the development of warnings necessitates a "team approach," requiring experts in areas such as Psychology and English. . . . . Dr. Kasbekar "would not go to a company and say, hey, let me rework your warning and let's stick it on a product." [H]e cannot recall drafting a mock up or proposed warning in any other case; this is his first attempt. Indeed, he admits that warnings expertise is not included on his C.V., because "I wouldn't go out and say I'm a warnings expert."

[1] Human factors is essentially the study of "the interrelationship between human behavior or capabilities and the surrounding environment." Douglas R. Richmond, *Human Factors in Personal Injury Litigation*, 46 Ark. L. Rev. 333, 335 (1993).

(ECF No. 71-1 at 16–17 (citations omitted).)

This court finds, however, that these reasons, taken together, are not enough to exclude Dr. Kasbekar's warnings opinion testimony on the grounds that he is not qualified. *See, e.g*, *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244–45 (3d Cir. 2008) (reversing the district court's decision that the expert was not qualified to testify as to inadequate warnings for a products liability claim based on his own statement that he did not "offer himself as a warnings expert").

According his C.V., Dr. Kasbekar has his Ph.D. in Mechanical Engineering and Material Sciences from Duke University and specializes in those fields "with an emphasis on accident investigation, failure analysis, safe product design, computer simulation and 3D-visualization." (ECF No. 66-3 at 1.) Dr. Kasbekar has worked in the areas of "forensic engineering, materials characterization, product liability, and failure analysis" as part of his consultation work with Research Engineers, Inc. since 1987. (*Id.*) He also has "applied his computer expertise to the areas of accident reconstruction, failure analysis, safe product design, and human factors studies," (*id.*), and additionally has relevant experience and/or post graduate training in "defect and failure analysis of automotive components." (*Id.* at 2.) Dr. Kasbekar also has taught mechanical engineering at the Duke University School of Engineering since 1995. (*Id.* at 1.)

This court believes these credentials qualify Dr. Kasbekar to develop and issue the type of warnings opinion he does in this particular case. The fact that Dr. Kasbekar is not a "human factors" or "warnings" expert does not mean that there is no "specialized knowledge" he can provide to inform Plaintiff's allegations that the jet ski warnings were inadequate. *See Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996) ("[I]t is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most

appropriate."). As to Defendants' specific arguments, Dr. Kasbekar also testified: "I have training and expertise with regard to the need for warnings, the basic ingredients of a warning, the purpose of the warnings, hazard analysis. . . . With regard to ANSI[2] standards, the components of a warning, the need for warnings, where warnings come into the engineering design process I think I do have expertise in that area." (ECF No. 83-12 at 5.) And while Dr. Kasbekar "would not go to a company and say, hey, let me rework your warning and let's stick it on a product," he also states the following: "I may go to the company and say . . . you need to do your risk analysis. Here are the hazards associated with it. Here are the severity of the hazards. This justifies a warning, the warning needs to have these ingredients. Here are some suggestions." (ECF No. 71-7 at 8.)

Finally, litigation experience does not, alone, qualify one as an expert, but courts do consider it as a weighing factor in determining the qualifications of an individual to provide expert testimony on warning opinions. *See, e.g.*, *St. Pierre v. Maingot*, 2003 WL 25689900, at *3 (E.D. La. 2003) (denying the motion in limine of the defendant, Yamaha Motor Corporation, to exclude the expert testimony and specifically noting that the expert has "given deposition testimony in at least 151 cases in the past five years, and has been accepted and testified at trial more than 41 times in that same period, including several cases involving Yamaha Wave Runners"). Here, Dr. Kasbekar stated in his deposition testimony that he has testified "several dozen" times with regard to warnings opinions. (ECR No 71-1 at 6.)

Insofar as Dr. Kasbekar expert testimony would consist of the conclusions he makes in his report, the court finds that he is qualified to issue those opinions in the form of expert testimony.

The court then proceeds to Fed. R. Evid. 702's remaining requirements that the testimony be "based on sufficient facts or data," be "the product of reliable principles and methods," and that

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the expert "reliably appl[y] the principles and methods to the facts of the case." As Defendants correctly note, courts have concluded that "the same reliability requirements that apply to alternative design apply to alternative warnings." *Bourelle v. Crown Equip. Corp.*, 220 F.3d 532, 538 (7th Cir. 2000). Because the *Daubert* factors apply to expert testimony regarding alternative design, the court evaluates the warnings opinion testimony under that same standard.

To inform both his opinion on the inadequacy of the product's warning and his proposal for an alternative warning system in this case, (*see* ECF No. 76-8), Dr. Kasbekar stated that he reviewed the product's warning and placement and consulted with Dr. Mike Maddox, who holds a Ph.D. in industrial engineering. (ECF No. 71-7 at 48–49 ("[W]e together as a team went back and forth and came up with a seat label.").) Dr. Kasbekar also apparently relied on the affidavit of a Dr. Edward Karnes that contained opinion information on the inadequacy of a PWC warning in a separate products liability case. (*See* ECF No. 71-7 at 13–16.)

Defendants mainly contend that because Dr. Kasbekar's proposed warning system has not been tested and that he cites no studies to support his opinion, his testimony lacks scientific data. (ECF No. 71-1 at 23–24.) It is not evident that a warnings experts' testing of a proposed alternative warning system is a brightline requirement for a court to deem the opinion reliable under *Daubert*. *See, e.g.*, *Thomas v. Bombardier Recreational Prods, Inc.*, 2010 WL 4188308, at *6 (M.D. Fla. 2010) (citations omitted) (concluding that under appellate precedent, the parties were "incorrect in arguing that an expert cannot be allowed to testify without testing [the expert opinions of warnings placement on a personal watercaft]" and further stating that "[a]n expert may testify to an opinion which is based on experience, training, or education, and not upon the scientific method, if the Court finds the opinion sufficiently reliable"); *Jaurequi v. John Deere Co.*, 971 F. Supp. 416, 428–29 (E.D. Mo. 1997) (concluding, under review for summary judgment, that the expert opinion met

Daubert's reliability requirements despite the expert's statement that "he had done no testing as to whether any of his suggested warnings would have changed the plaintiff's behavior or prevented the accident"). Nonetheless, as Defendants demonstrate, other courts have emphasized whether an expert's proposed warning system has been tested, among other factors, for their purposes of determining reliability. (*See* ECF No. 71-1 at 22 (citing relevant cases).)

As Defendants rightly point out, however, not only has Dr. Kasbekar not tested his proposed alternative warning system, but also he provides no specific relevant research or studies—in neither his deposition testimony nor his report—on which he relies to inform his proposed warnings system or his opinion that the warnings are "inadequate and insufficient." (ECF No. 71-12 at 2.) For example, he specifically acknowledges, himself, that he cites no "authoritative piece of research" that would indicate that warnings on the seat would be read more than warnings on the craft itself. (ECF No. 71-7 at 49.) Moreover, Dr. Kasbekar stated in his deposition testimony that 1) he does not feel "qualified to author a warning from start to finish that would be ready to be placed on a product;" 2) he has never authored any articles on warnings; and 3) he knows of no other PWC manufacturer that has a warning on the seat like he proposes. (*Id.* at 3, 6.)

Plaintiff's response that Dr. Kasbekar relies on "years of experience," "classes and education," and "knowledge" to develop his proposed warning system opinion, (ECF No. 83 at 10–11), does not overcome what this court deems as deficiencies under *Daubert*'s standard for reliability for him to be able to opine to a jury the opinion he proffers in his report or, as he states in his deposition testimony, that "[t]he warning that we're proposing be put on the seat would have

had a greater impact than the existing warnings on the jet ski."[3] (ECF No. 71-7 at 49.) This court concludes that Dr. Kasbekar's proposed warning system opinion is not "based upon sufficient facts or data" and is not "the product of reliable principles and methods" under Fed. R. Evid. 702.[4] *See, e.g.*, *Thierfelder v. Virco, Inc.*, 502 F. Supp. 2d 1025, 1032 (W.D. Mo. 2007) (concluding that the expert opinion testimony was reliable under *Daubert* because he had "drafted multiple warnings about the danger posed by furniture himself in his 30 years of experience as a design and safety engineer").

This court therefore grants Defendants' Motion in Limine with respect to Dr. Kasbekar's proposed warnings system opinion.[5]

B. Design Defect Opinions

1. Parties' Arguments

Like its arguments regarding the warnings opinion, Defendants challenge the qualifications of Dr. Kasbekar as to his expert testimony on the design defect opinions. Defendants argue that the opinions should be excluded because having an engineering degree does not necessarily "qualify [Dr. Kasbekar] to testify on the design and functioning of any and all products." (ECF No. 71-1 at 26–27.)

[3] Indeed, Dr. Kasbekar also followed that proposed opinion up with this: "Quite frankly, I think the jury can look at what's there and will propose for themselves and make the decision on their own." (ECF No. 71-7 at 9.)

[4] Given the court's ruling on Dr. Kasbekar's proposed warning system opinion, the court finds it unnecessary to address Defendants' argument of Dr. Kasbekar's inadequate "regurgitate[ion]" of other experts to form his proposed warnings system opinion, (*see* ECF No. 71-1 at 19), and their argument that Dr. Kasbekar's proposed warning system opinion would be "of no assistance to the jury." (*Id.* at 25–26.)

[5] In her Amended Complaint, Plaintiff argues that the warnings Defendants provided for its product were "in violation of ANSI standards." (*See generally* ECF No. 19.) The court makes no admissibility findings at this time as to any potential expert testimony from Dr. Kasbekar on ANSI standards, generally.

Defendants further argue that the design defect opinions are inadmissible because the underlying "methodology and bases" for the opinions are unreliable. Defendants specifically point to the fact that 1) the videotaped water testing in Florida (utilizing the Cruiser seat and a seat strap) Dr. Kasbekar relies on for his opinion fails to take into account the specific facts at issue in this case, (*Id.* at 28–31) and 2) the computer simulation (testing the Cruiser seat design) Dr. Kasbekar relies on to reach his design defect opinions "does not reliably recreate the accident at issue and is not relevant or helpful to the trier of fact." (*Id.* at 32.) Lastly, Defendants contend that if this court deems either of his warning or his defective design opinions inadmissible, then all of the opinions must be excluded because, according to Defendants, Dr. Kasbekar claims that the "implementation of one of his proposed changes without the others would not make the craft reasonably safe." (*Id.* at 35.)

Plaintiff responds that the Florida water-testing is reliable because Dr. Kasbekar "duplicated the exact tests that Yamaha ran" on its Cruiser seat on the same jet ski model (the WaveRunner) in dispute here. (ECF No. 83 at 8.) Plaintiff further states that the testing conditions were "substantially similar" to those circumstances of the actual accident. (*Id.*) As to the computer simulation testing, Plaintiff explains that the simulation was to test the Cruiser seat's back bolstering by "isolating [its] geometry" and further maintains that the Dr. Kasbekar can authenticate the simulation testing for admissibility purposes. (*Id.* at 8–9.)

2. Court's Review

Dr. Kasbekar's design defect testimony essentially is that a Cruiser seat (as opposed to the standard seat) and a seat strap were reasonable alternative designs to mitigate or exclude Plaintiff's injuries. (*See* ECF Nos. 83 at 2; 71-12 at 1–2.) To reach his opinion, Dr. Kasbekar relied on testing, which consisted of 1) a computer simulation intended to highlight the differences between

the standard seat and the Cruise seat and 2) a water testing, in which both the standard seat and the Cruiser seat along with a strap were tested to demonstrate the effects of those modifications on rearward movement. (ECF No. 71-1 at 28–29.)

The court first observes that, contrary to Defendants' assertions otherwise, (*see* ECF No. 83 at 6), Dr. Kasbekar is qualified to provide expert testimony as to his design defect opinions for the same reasons this court already discussed *supra* Part III.A.2 with respect to the warnings opinions. Defendants' arguments that Plaintiff has no professional training in the personal watercraft industry and that his C.V. indicates no significant experience in boating or design, (*see* ECF No. 71-1 at 27), are not enough to overcome his qualifications as an expert engineer with extensive professional and academic experience to issue the design defect opinions he reaches in this case.

Having determined that Dr. Kasbekar is qualified to provide expert testimony as to his design defective opinions in this matter, the court next turns to the reliability of the water testing and computer simulations on which his opinions rest.

a. Water Testing

Under *Daubert*'s guidance, the court finds unavailing Defendants' arguments that Dr. Kasbekar's design defect testimony should be excluded because the water testing's conditions were so "dissimilar from and irrelevant to the facts at issue." (ECF No. 71-1 at 30.)

The Court of Appeals for the Fourth Circuit has stated that expert testimony should be excluded if it relies on product tests under "such different circumstances" that the results are "largely irrelevant." *Chase v. Gen. Motors Corp.*, 856 F.2d 17, at 20–22 (4th Cir. 1998). But this court does not find "such different circumstances" here with regard to Dr. Kasbekar's water testing that warrant exclusion of his design defect testimony based on those tests.

Of course, no testing circumstances will perfectly mirror those of the specific factual circumstances of a given case. Moreover, testing conditions do not have to be so in order to be deemed reliable and relevant. *See U.S. v. Russell*, 971 F.2d 1098, 1106 (4th Cir. 1992) (observing that for the purposes of admitting evidence of experiments made out of court, "simulated conditions . . . need only be 'substantially similar'; they need not be 'identical'"); *Tunnell v. Ford Motor Co.*, 330 F. Supp. 2d 731, 746 (W.D. Va. 2004) (evaluating the expert testimony in the products liability context and stating that "[p]erfect identity between experimental and actual conditions is not required").

The differences between the water testing conditions and the facts of this case[6] that Defendants highlight are not so significant that testimony based on the tests altogether should be excluded for irrelevance. As Plaintiff notes: 1) "the testing utilized the exact PWC the Plaintiff was injured on, 2) "the testing was done on the water, not on land simulating water-like conditions," 3) "the test subject was seated at the rear of the craft," and 4) " the testing was done during the initial acceleration of the craft." (ECF No. 83 at 8.) The court deems these similarities between the water tests and the factual circumstances of this case "substantially similar" and therefore able to withstand Defendants' arguments that Dr. Kasbekar's testimony based on the tests should be excluded for unreliability and irrelevance under Rule 702 of the Federal Rules of Evidence. *Russell*, 971 F.2d at 1106. To the extent that Defendants find any differences between

[6] Defendants note the following differences that they argue warrant the exclusion of Dr. Kasbekar's design defect testimony based on his water testing: 1) that the actual accident involved "four riders with a combined weight of 450 pounds," and the water testing utilized "two male riders with a combined weight of 325 pounds," 2) that all of Dr. Kasbekar's water tests showed rider ejection from the craft when acceleration was over .4 Gs despite his acknowledgment that "the acceleration capability of the craft with four riders would be less than .3 Gs," and 3) that "the riders in the water testing are shown with their feet underneath them, with their legs prepared to push back in the videotapes showing rearward ejection, but their feet and legs forward in the videotapes featuring the Cruiser seat and seat strap, where they were able to hold on." (ECF No. 71-1 at 30.)

the testing conditions and the factual circumstances important for challenging Dr. Kasbekar's opinions on reasonable alternative designs, Defendants can highlight those differences for a jury. *See id.* (affirming a district court's admission of expert testimony and concluding that "[t]he significance of . . . differences" between the testing conditions informing the testimony and the actual conditions "clearly was a question of weight for the jury, not a question of admissibility for the [district] court").

b. Computer Simulation

The court also finds Dr. Kasbekar's computer simulations, which partly forms the basis of Dr. Kasbekar's opinions, reliable under the *Daubert* factors.

As a threshold matter, the court observes that the Fourth Circuit has previously declined to adopt a "rigid standard for the admissibility of computer animated videotape simulations." *Strock v. S. Farm Bureau Cas. Ins. Co.*, 998 F.2d 1010, 1010 (4th Cir. 1993) (table decision). Further, it has held that "trial judges [] are in the best position to consider the relevancy of offered evidence and to weigh its probative value against its potential prejudicial effect." *Id.* (citing *Reed v. Tiffin Motor Homes, Inc.*, 697 F.2d 1192, 1199 (4th Cir. 1982).

Because "computer simulations are treated as a form of scientific evidence, offered for a substantive, rather than demonstrative purpose," *Lorraine v. Markel Am. Ins. Co.*, 241 F.R.D. 534, 560 (D. Md. 2007) (citations omitted), courts have required simulations to be authenticated. *Id.* The United States District Court of Maryland has stated that "use of an expert witness to authenticate a computer simulation likely will also involve Federal Rules of Evidence 702 and 703." *Id.* Defendants cite to at least one other court that has considered the following in evaluating whether an expert can provide a foundation for the admissibility of a simulation:

> (1) the qualifications of the expert who prepared the simulation; (2) the capability and reliability of the computer hardware and software used; (3) the calculations

> and processing of data were done on the basis of principles meeting the standards for scientific evidence under [Fed. R. Evid.] 702; (4) the data used to make the calculations were reliable, relevant, complete, and properly inputted; and (5) the process produced an accurate result. Simulations which are not properly authenticated are excluded.

Bullock v. Daimler Trucks N. Am., LLC, 819 F. Supp. 2d 1172, 1175 (D. Colo. 2011) (quoting 5 Federal Evidence § 9:26 (3d ed. 2010).)

Dr. Kasbekar stated in his deposition testimony that he consulted with Altair Engineering Group ("Altair") and relied on its programming assistance to complete his simulations. (ECF No. 71-7 at 20.) Defendants argue that Plaintiff cannot authenticate Altair's computer simulation because he cannot "offer[] up Altair's work product as his own" and did not "create[] the simulation at Altair." (ECF No. 71-1 at 33.) Defendants also suggest that Dr. Kasbekar is not in a position to testify on the capability and reliability of the hardware and software Altair used. (*Id.*) Plaintiff counters that Dr. Kasbekar can authenticate the simulation because Dr. Kasbekar "developed the inputs by modeling the seat characteristics" in the simulation; he "chose a validated test dummy, and disclosed the inputs to the defense"; he "reviewed the results for accuracy of the model;" and he is "familiar with and used accepted software." (ECF No. 83 at 10.) After reviewing the record, this court agrees with Plaintiff and concludes that Dr. Kasbekar is in a reasonable position to authenticate the computer simulations as an expert witness given his extensive involvement in the simulation design. (*See* ECF No. 71-7 at 20–21.)

Regarding the admissibility of simulations as to reliability, as Plaintiff notes, courts have recognized that "analyzing computer simulations under *Daubert*" requires "ask[ing] whether the simulation has been tested, subjected to peer review, has a known error rate, and has general acceptance in the scientific community." *In re Yamaha Motor Corp. Rhino ATV Prods. Liab. Litig.*, 816 F. Supp. 2d 442, 460–61 (W.D. Ky. 2011) (citations omitted). Courts have also

recognized that the *Daubert* factors do not apply to computer simulations as they normally would to standard expert testimony. *Livingston v. Isuzu Motors, Ltd.*, 910 F. Supp. 1473 (D. Mont. 1995).

Defendants argue that the simulation should be excluded as unreliable because Dr. Kasbekar instructed Altair to "model the seats as 'rigid objects" and to input a "friction coefficient" that does not "reflect a human sitting on an actual seat." (ECF No. 71-1 at 32.) Defendants also challenge the discrepancies between the "horizontal forces" Altair applied in the simulation and those Dr. Kasbekar applied in the water testing. (*Id.*)

Defendants' arguments fail. Here, Dr. Kasbekar explains that he modeled the seat as more rigid, with less coefficient of friction, and without real human interaction to isolate the geometry of the seat as a factor, which apparently was the intended relevant purpose of the simulation. (ECF No. 71-7 at 29–31.) Moreover, as Plaintiff mentions, Dr. Kasbekar seems to have relied on respectable models and methods in designing the simulation. (*Id.* at 25.). As far as the "horizontal forces" Defendants criticize, the court first fails to understand why, as Defendants seem to suggest, simulation conditions necessarily have to match the water testing conditions in order for the simulation to be reliable. Regardless, Dr. Kasbekar provides a reasonable explanation for the discrepancies between the simulation and the testing. (*Id.* at 36–38.) Plaintiff concludes that "[a]t these acceleration levels [Dr. Kasbekar applied], and with the geometry isolated, the testing aids the jury in determining if the bolster contoured on the back of the seat assists and prevents a rear passenger from coming off the back during initial accerleration [sic]." (ECF No. 83 at 9.) Given the apparent purpose of the simulation and reasonable methods applied to achieve that purpose, the court finds no reason to disagree with Plaintiff and concludes that the simulation is reliable.

Finally, the court rejects Defendants' catchall argument that the inadmissibility of one of Dr. Kasbekar's opinions requires all of his opinions to be excluded. (*See* ECF No. 71-1 at 33–34.)

In support of their argument, Defendants point to a few sentences of Dr. Kasbekar's deposition testimony to argue that his conclusion is that "the implementation of one of [his] proposed changes without the others would not make the craft reasonably safe." (*Id.* at 34). Dr. Kasbekar's report, (*see* ECF No. 71-12), does not appear to explicitly conclude that the "warnings and design opinions are dependent upon each other." (ECF No. 71-1 at 15.) Moreover, though Dr. Kasbekar suggests that he "look[ed] at the entire design" in formulating his opinions about alternative warnings and designs, (*see* ECF No. 71-1), it is not apparent to this court how deeming the proposed warning system opinion unreliable necessarily renders the design opinions unreliable—Dr. Kasbekar's opinions on these two issues did not involve the same "facts or data" or "principles and methods." Fed. R. Evid. 702. And it does not seem reasonable to conclude from Dr. Kasbekar's testimony that he believes it is *only his* combination of alternative warnings and designs that would have made the personal watercraft reasonably safe.

IV. CONCLUSION

Based on the aforementioned reasons, the court hereby **GRANTS IN PART** and **DENIES IN PART** Defendants' Motion in Limine to Exclude Plaintiff's Expert Opinions (ECF No. 71-1). Specifically, Dr. Kasbekar's testimony as to the proposed warnings opinion will be excluded.

IT IS SO ORDERED.

J. Michelle Childs

United States District Judge

July 29, 2016
Columbia, South Carolina